Field Modification Form
Lower Passaic River Restoration Project
Remedial Investigation
Project No: 60145884

AECOM

Field Modification Number: FM-110921
Document (plan or SOP title and date) *Quality Assurance Project Plan for Lower Passaic River Restoration Project: Periodic Bathymetric Surveys, Rev. 2, May 2010*
Activity: Performing Bathymetric Survey of Lower 14 Miles of the Passaic River After Hurricane Irene
Proposed Modification: The Periodic Bathymetric Surveys QAPP is modified by this Field Modification Form to include performance of a bathymetric survey of the entire lower 14 miles of the Passaic River after the passage of Hurricane Irene. Work will be performed following the procedures used during the 2010 survey (*Quality Assurance Project Plan for Lower Passaic River Restoration Project: Periodic Bathymetric Surveys*, Rev. 2, May 2010.)
Effective Date: September 22, 2011
Rationale: The stability of the Lower Passaic River (LPR) river bottom sediments must be understood to characterize the fate and transport of contaminated sediments as well as to select and design appropriate remedial solutions. Sediment stability is expected to vary over (1) location along the river and (2) over time given the varied morphology of the river and the varied nature of the hydrodynamic forces acting on river bottom sediments. Sediment stability can be evaluated in part by comparing river bottom depths between periodic bathymetric survey events. The results offer a line of evidence (in addition to sampling/physical characterization, radio dating, probing, and geophysical investigations) to identify erosional, stable, or depositional areas along the river and help develop the relationship between sediment stability and hydrodynamic conditions. The passage of Hurricane Irene on August 27-28, 2011, provides a unique opportunity to characterize the potential effects of a large storm event on the Lower Passaic Study Area (LPRSA). River flows following Hurricane Irene were the highest since October 1903, at 20,800 cubic feet per second (cfs) recorded at the United States Geological Survey (USGS) Little Falls gauging station (concurrent flows at Dundee Dam were 26,000 cfs), exceeding the previous recent high flow events of March 2010 (15,800 cfs) and March 2011 (16,200 cfs). Water levels peaked at approximately 14 feet, (exceeding flood stage by approximately seven feet) and rose initially due to storm surge and remained elevated for several days due to freshwater runoff. A bathymetric survey following this event will provide data for comparison with previous bathymetric surveys (2007, 2008, and 2010) to support characterization of changes, if any, which may have occurred during the high flow event. To support this characterization, a bathymetric survey is scheduled for October 2011.

Submitted by: Doug Simmons	**Date:** September 22, 2011
FTM Approval: William Denbury	**Date:** September 22, 2011
Project QA Manager Approval: Debra L. Simmons	**Date:** September 22, 2011
Task Manager Approval: Doug Simmons	**Date: September 22, 2011**